

Remarks

Claims 20-37 were the subject of the office action dated July 25, 2007. Claims 25-34 and 37 were withdrawn from consideration as being directed to non-elected subject matter; these claims are canceled accordingly without prejudice. Claim 20 is combined into claim 1; claim 24 is accordingly canceled without prejudice. New claim 38 is added. Thus, claims 20-23, 35-36, and 38 are now presented.

The applicants respectfully traverse the statements made regarding the entitlement of priority to the provisional application (60/146,646). SEQ ID NOS:9 and 10 were provided in Figure 1 of the provisional application. These sequences were added to the sequence listing to comply with the related rules.

Regarding sections 7 and 8 (pages 3-4) of the office action (regarding the Information Disclosure Statement), copies of references R3 and R14 are attached, as is an abstract of references R13. It is believed that full copies of these references were provided in the prior application, per 37 CFR §1.98(d). However, it is believed that reference R13 was (and the other two references were) provided mainly for background information and that they are no more relevant than any of the other cited references. Thus, additional efforts were not expended to locate a full copy of R13.

Regarding section 9 of the office action, the specification is amended to update the status of the priority applications.

Regarding the §112 rejection, the applicants do not agree that the specification does not adequately describe polynucleotides encoding the specified proteins. However, as the first paragraph on page 7 of the office actions states that the Examples of the instant specification are drawn to fusion proteins of a *Cry* toxin protein and a phage coat protein and display of the proteins on the phage surface, the claims are amended accordingly. Reference to a polynucleotide is removed. Thus, this rejection should be rendered moot.

Regarding the Marzari reference cited under 35 USC §102(b), attached is an expert declaration by Dr. Michael Adang. Marzari does not show an active *Cry* toxin (fused with a phage protein) displayed on the surface of the phage. As Dr. Adang explains, the subject invention is the first demonstration of this subject matter.

Uses for this invention include mutating *Cry* proteins and then easily and quickly screening them for binding and then toxin activity. This was not possible before the subject invention. Marzari taught against using active toxins (now specified in the claims to further distinguish from Marzari), because the *Cry* toxins were not produced or displayed properly. It appears that they actually killed the cells used by Marzari. Thus, Marazari suggests (and uses) non-toxic fragments of *Cry* proteins. Some relevant sections of Marzari are quoted in Dr. Adang's declaration.

With the fragments described by Marzari, one could screen with the binding fragment for binding. However, one could not then use the phage/fragment to screen for insecticidal activity of the displayed protein. Thus, the subject invention also provides unexpected advantages over the cited art.

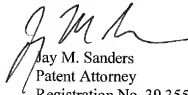
In light of all the foregoing, the withdrawal of the rejection under 35 USC §102(b) is respectfully requested.

Regarding the Kasman reference cited under 35 USC §102(a), the attached declaration by Dr. Adang also functions as a *Katz* declaration. The distinctions between authorship and inventorship are explained in detail therein. In addition, it is also clear that Drs. Kasman and Adang conceived of the subject invention before their cited publication. In light of this, the withdrawal of the rejection under 35 USC §102(a) is respectfully requested.

The applicants believe that the subject application is in condition for allowance, and such action is respectfully requested. The applicants invite the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

The Assistant Commissioner is hereby authorized to charge any fees under 37 CFR §§1.16 and 1.17 as required by this paper to Deposit Account 19-0065.

Respectfully submitted,



Jay M. Sanders  
Patent Attorney  
Registration No. 39,355  
Phone No.: 352-375-8100  
Address: P.O. Box 142950  
Gainesville, FL 32614-2950

JMS/mrc

Attachments: Petition and Fee For Extension of Time Under 37 CFR §1.136(a)  
Dr. Michael J. Adang's Expert Declaration  
References R3 and R14, and abstract of reference R13